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ABSTRACT

This report explores the characteristics of giftedness in minority, language minority, and economically disadvantaged student populations and ways to assess giftedness in these populations. A qualitative content analysis is used to analyze gifted literature to determine characteristics of gifted children in general (n=262) and characteristics of gifted children from specific cultural groups (n=95), including African Americans, Native Americans, and Hispanics. Ten core attributes of giftedness are identified: communication skills, imagination/creativity, humor, inquiry, insight, interests, memory, motivation, problem-solving, and reasoning. A general description accompanies each identified attribute. Implications are discussed for using these core attributes to facilitate educators' recognition of gifted abilities in student populations from minority or economically disadvantaged families and areas, and to guide educators in the selection of measures for identification of minority or economically disadvantaged families and areas. Recommendations for educators include the use of a variety of evaluation measures to assess giftedness and the use of standards to interpret performance on tests that accommodate the differences in the expression of gifted students from diverse backgrounds. An appendix includes a list of categories of giftedness and relevant checklist indicators for the different categories. (Contains 74 references.) (Author/CR)

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ABSTRACT

Identifying the core attributes associated with the giftedness construct would provide a better basis for establishing procedures to recognize, identify, and plan educational experiences for gifted students from minority or economically disadvantaged families and areas. A qualitative content analysis method was used to analyze phrases and sentences in literature on the gifted to establish core attributes of giftedness. Data for this analysis were collected from two sources: (a) literature on characteristics of gifted children in general, and (b) literature on characteristics of gifted children from specific cultural groups, e.g., African Americans, Native Americans, and Hispanics. Ten core attributes were identified: communication skills, imagination/creativity, humor, inquiry, insight, interests, memory, motivation, problem-solving, and reasoning. Implications are discussed for using these core attributes: (a) to facilitate educators' recognition of gifted abilities in student populations from minority or economically disadvantaged families and areas, and (b) to guide educators in the selection of measures for identification of minority or economically disadvantaged families and areas.

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EXECUTIVE SUMMARY

Introduction

An ultimate goal of gifted educators is to recognize, as early as possible, those children who show potential for exceptional performance as adults and to provide them with the special instruction they need to develop that potential. A common assertion is that children who show this potential for exceptional performance are present in every segment of society (Baldwin, 1991; Clark, 1992; Davis & Rimm, 1994; Gallagher, 1994b; Kitano & Kirby, 1986; Maker, 1983; Marland, 1972; Pendarvis, Howley, & Howley, 1990). However, it is consistently observed that gifted and talented children who are members of minority populations, who have limited proficiency in the English language (LEP), or who come from economically disadvantaged families and areas are underrepresented in programs for the gifted (Ford & Harris, 1990; Frasier, in press; Gallagher, 1991; Gallagher & Courtright, 1988).

One of the reasons given to explain the underrepresentation of these students in gifted programs relates to the ability of educators to recognize their display of "gifted behaviors" (Baca & Chinn, 1982; Bermúdez & Rakow, 1990; Bernal, 1980; Dabney, 1988; Leung, 1981; Pendarvis, Howley, & Howley, 1990; Whitmore, 1982). These authors suggest that the low socioeconomic status (SES), minority group membership, or limited competence in the use of the English language of these children may negatively affect the identification of these children as gifted. As Gallagher (1994b) notes, for example, difficulties in trying to sort out the unique characteristics of minority gifted students may be related to the fact that many of them come from poverty homes. Clark (1992) maintains that "A major problem encountered in providing for gifted students among the low SES population is the attitude, shared by teachers and parents alike, that giftedness could not exist in this population" (p. 428). According to Callahan and McIntire (1994), the emphasis on remediation rather than development of talent may account for the low recognition of gifted Native American and Alaska Native students. Others have made similar observations about the emphasis on remediation rather than on the development of talent in minority groups (Baldwin, 1991; Cummins, 1989; Ford & Harris, 1990; Hilliard, 1991; Samuda, Kong, Cummins, Pascual-Leone, & Lewis, 1989). The purpose of this

paper is to explore a different perspective for observing and assessing characteristics of giftedness in minority, LEP, and economically disadvantaged student populations.

First, a summary of what we know about the attributes of gifted and high achieving students from minority or economically disadvantaged families and areas is presented. Second, a proposal for focusing on core attributes that underlie the giftedness construct as a more viable basis for observing and identifying giftedness in minority or economically disadvantaged student groups is presented. A description of how a set of core attributes of giftedness was derived is also provided. Finally, implications for using these core attributes as the basis for a paradigm that better addresses the identification and education of gifted students from underrepresented populations are presented.

Target Populations

Race, ethnicity, culture, minority group status, low socioeconomic status, handicapped status, preschool and primary aged children, and gender have all been used to label students who are underrepresented or underserved in programs for gifted children (Gallagher, 1994a; Passow, 1982; Richert, 1991; VanTassel-Baska, Patton, & Prillaman, 1991; Whitmore & Maker, 1985). It is beyond the scope of this paper to address each one of these groups. Because African American, Native American, and Hispanic students have been and continue to be the most prominent subjects when underrepresentation in gifted programs is discussed, it is these gifted students who are the focus in this paper. For the most part, these students will be referred to as the target population. Labels such as minority, culturally different, and economically disadvantaged are frequently used interchangeably in the literature and in practice to refer to the students who are the target population in this paper. Therefore, anyone of these terms will be used in this paper as appropriate.

Scope of the Literature Review

The literature chosen for review in this paper was selected if it contained primary descriptions of the cognitive and affective characteristics of target population students. Causes for any of these descriptions are included only if they are an integral part of the discussion of their characteristics. However, the primary concern is not the cause but the characteristics of these students that have emerged over the years.

Because of the limited base of empirical research investigating the attributes of gifted target students, some of the descriptions have evolved from speculative opinions and conclusions derived from practice or experience. However, as Ogawa and Malen (1991) have observed, such literature can still provide important insights because of the meanings people attach to the phenomenon of interest, in this case the gifted potential in students from target populations.

Many of the studies and other reports explicitly describing the characteristics of target students were carried out from 1960 through the 1980s. One of the reasons may be that the objectives of researchers and practitioners during this period were primarily focused on developing theories to account for cultural deficiencies or cultural differences. More recently, studies and reports have focused on developing identification strategies and programs to address the educational and environmental deficiencies that impede the identification of gifted target students.

What We Know About Attributes of Giftedness in Target Student Populations

Findings from several research studies and reports have recounted the attributes of gifted or high achieving target population students. The reports and studies reviewed here are concerned with comparisons within and between groups and descriptions based on studies of specific cultural and disadvantaged groups. The themes of these studies and reports are concerned with personality variables, motivation to achieve, cognitive attributes, and other behavioral descriptions.

Between-Group and Within-Group Comparison Studies and Reports

Frierson (1965) was interested in the effects of cultural deprivation on the development of talent. He undertook a study to determine any significant differences between upper and lower status students who were divided into four groups: (a) upper status gifted students, (b) lower socioeconomic status gifted students, (c) upper status average students, and (d) lower socioeconomic status average students. Frierson concluded that differences between the two groups of gifted children were clearly associated with differences in their socioeconomic status.

Other studies comparing target population students were concerned with differences in self-concept, personality variables, and other factors attributing to their success. Tidwell (1981) conducted a study of the characteristics that distinguished gifted minority and low socioeconomic status children from their nongifted peers. Children in this study were selected for gifted program participation by criteria that did not rely on intelligence test scores as the primary criterion. She found that they had significantly higher self-concepts than nonselected students. Davidson and Greenberg (1967) compared differences in personality variables between high and low achievers from lower class backgrounds. Attributes that distinguished between the two lower class groups were found to be very similar to those that distinguish between middle class achievers and underachievers. Glaser and Ross (1970) retroactively investigated factors that contributed to the differential success rates of individuals growing up in disadvantaged environments. Fourteen factors were found to distinguish between successful Mexican American and African American males and those who were successful. Successful subjects were described as (a) having a strong sense of self, pride, and worth; (b) being able to free themselves from the negative conditions of their environment; (c) having a strong belief that hard work or study would pay off, and (d) being effective in their ability to channel any rage they felt over being disadvantaged into strategic actions. Further, successful subjects were attracted by goals such as creativity and self-determination, and had high risk-taking capacities especially when experimenting.

While results of studies comparing personality or nonintellective traits of gifted advantaged and disadvantaged children appear to reveal many similarities across cultural and economic boundaries, significant but more negative differences in cognitive functioning have been reported in other studies. Tannenbaum (1983) suggested that these differences are most evident in cognitive organizing as is demonstrated by the lowered performance of disadvantaged gifted children on tests of mental ability. Sisk (1973) concurred when she describes the deficiencies in cognitive functioning of disadvantaged gifted students as evidenced by their limited vocabularies, use of nonstandard grammar, inability to observe and state sequences of events, inability to perceive cause and effect relationships, and inability to categorize.

A different view of the cognitive competencies of African American individuals, including children, is presented by Shade (1991). Drawing from several sources, she concluded that African Americans appear to have high motoric capabilities and use visual perception as a way of protecting and orienting themselves in the environment rather than for gathering information. African American children are also largely trained to concentrate more on people rather than non-people type information, thus being more people than object oriented. Shade also pointed to a preference among African Americans for affective materials and a high level of social interaction in their learning environments. Whereas Tannenbaum (1983) and Sisk (1973) saw cognitive differences as deficiencies that underlie the low test performance of African American children and their weak performances in the classroom, Shade noted that the differences really reflected cognitive strengths that are expressed in distinct ways due to differences in information processing preferences and differences in information analysis and organization.

Bruch (1971) isolated patterns of cognitive strengths among southeastern African American students using an abbreviated version of the Stanford-Binet Intelligence Test. She concluded that these students evidenced strengths in visual, auditory, and figural content (e.g., art and music); memory; convergent production in practical problem-solving situations; awareness of details of descriptions; fluency of ideas; spontaneous categorization and classification of spatial items; and awareness of natural relationships or systems. Similarly, Meeker (1978) used the Structure of Intellect (SOI) to determine that the pattern of gifted strengths among Navajo children included auditory memory and figural ability.

Finally, Baldwin (1978) described the common characteristics of students whose achievement might be negatively affected by cultural diversity, socioeconomically deprived status, and geographic isolation. Her list of characteristics included descriptions of their communication and learning styles as characterized by a language that is rich in imagery and is persuasive, a sensitiveness and alertness to movement, and an intuitive grasp of situations. She also described these children as (a) having strong group affiliations; (b) being skilled in dealing with their environment; (c) being adept at logical reasoning, planning, and pragmatic problem solving; (d) having a high tolerance for ambiguities; (e) having the ability to produce inventive and revolutionary ideas; and (f) being flexible and fluent thinkers.

Descriptions Specifically Related to Giftedness in Specific Minority Groups and Gifted Economically Disadvantaged Students

Hispanics

Bernal (1974) conducted a study to determine behavioral descriptors of gifted Mexican American students. Attributes or characteristics with the highest discriminant power were found to be related to these children's leadership behaviors, acceptance of adult authority, self-control, and above-average school performance. Zappia (1989) provided a similar description of Hispanic children when she describes their language preference, proficiency, and use patterns (in both languages) in the home, school, and community. Other attributes include their being able to successfully function in two cultures and to communicate fluently, even if the English used is non-standard (Maker & Schiever, 1989).

Native Americans

Tonemah and Brittan (1985) noted the strong tribal perspective associated with the concept of giftedness in their description of gifted attributes of Native American students. They delineated characteristics of gifted potential in four areas: (a) acquired skills in

language, learning, and technological skills; (b) tribal/cultural understanding referring to their exceptional knowledge of ceremonies, tribal traditions, and other tribes; (c) personal/human/qualities such as high intelligence, visionary/inquisitive/intuitive, respectful of elders, and creative skills; and (d) aesthetic abilities, referring to unusual talents in the visual and performing arts, and arts based in the Indian culture. Garrison (1989) described gifted Native American individuals as tending to be less dependent on language to communicate ideas, to learn by observation and to teach by modeling, and to consider the group more important than the individual.

African Americans

Hilliard (1976) concluded that gifted African American children demonstrate a synthetic-personal style. That is, they tend to approach the world in a way that allows them to bring together divergent experiences and to distill them to discover the essence of a matter without undue concern for all the small pieces which go to make up a given experience. This is in contrast to the atomistic-objective style wherein the habitual pattern for approaching an experience involves an attempt to break down that experience into components which can be understood.

Lee (1984, 1989) concluded from his study of successful rural African American adolescents, that they have positive self-concepts linked to their extended view of themselves as members of collective family and community systems, possess traditional values associated with their religious faith, and have good interpersonal relationships. They are also successful in school and active in a variety of extra-curricular activities. In addition these successful youth are keenly aware of future occupational opportunities and understand the education they must acquire to be prepared for such opportunities. Shade (1981) concluded from her study of educationally successful African American middle class students that the males are more introverted, emotionally stable, and more shrewd, though less expressive than males in the standardized sample of the *Coan-Cattell Early School Personality Questionnaire (ESPQ)*. Females were found to be more introverted and less expressive, more independent and less in need of protection, and displayed a tendency to be less placid, conforming, and tranquil than females in the standardized sample. Both males and females were very aware that to achieve their goals they must learn how to operate within the framework of certain expectations of their school and community, while also maintaining their concept of self-determination.

Economically Disadvantaged Children

As a result of observations made during a series of summer workshops conducted with disadvantaged children, Torrance (1971, 1977) developed a checklist to help guide the search for giftedness in culturally different groups. He named this checklist *The Checklist of Creative Positives*. Attributes included on the checklist are concerned with (a) problem solving skills (e.g., originality of ideas in problem solving, fluency and flexibility in figural media); (b) communication styles (e.g., use of expressive speech, use of colorful language rich with imagery); and (c) learning styles (e.g., enjoyment of skills in group activities). It also includes descriptions of (a) interests and activities enjoyed by culturally different children (e.g., enjoyment of and ability in music, rhythm, creative movement, dance, dramatics); and (b) descriptions of the typical methods these children use to respond to various stimuli (e.g., high emotional responsiveness, exceptional ability to express feelings and emotions).

A Summary of Themes

The literature reflects a strong tendency to focus on (a) similarities and differences in personality traits between gifted minority and majority students, (b) unique learning and communication styles presumed to be characteristics of specific cultural groups, and (c) the exceptional abilities that gifted target students demonstrate as they negotiate between their culture and the majority culture. Different issues shape the approach to the research and other writings developed to describe the characteristics of gifted target students. One approach was to focus on deficiencies. The emphasis is on economic disadvantage and its effects on cognitive functioning, performance in academic areas, and on general educational background and experiences. Another approach focused on these children's cognitive and creative strengths as revealed through testing and observing. Yet another approach was shaped by comparing the characteristics of disadvantaged students with advantaged students. Finally, an approach was developed out of a perceived need to base characteristics of gifted target students on results from investigations carried out within a specific cultural group.

These different approaches may well be the result of the continuous search that has been conducted to find effective ways to resolve the difficulties that minority students face in gaining recognition of their gifts and talents. They may also represent the many factors that must go far beyond descriptions of relevant characteristics of giftedness when describing gifted minority children. More than for any other group, these more extended discussions must include concerns with (a) discrimination in American society, (b) the value of efforts to establish the concept of giftedness within the boundaries of a specific cultural group, (c) the need to distinguish the meaning of giftedness within a minority group from the meaning of giftedness in the Euro-American culture, (d) the inadequacies of traditional assessment measures and procedures to identify gifted minority students, and (e) the effort that must be put forth to reconcile the concept of individual recognition for excellence with cultural concepts that emphasize group solidarity as a unique cultural feature.

Attributes Underlying the Giftedness Construct

As noted earlier, one of the problems felt to impact the representation of target population students in programs for the gifted is related to the inability of educators to recognize these students' display of gifted behaviors in the classroom. Plans to address this concern by describing giftedness in economically disadvantaged and limited English proficient populations were an integral part of a project at The University of Georgia (Frasier, 1990). The overall goal of this project was to develop a more effective way to facilitate the recognition of gifted children from these groups. A proposal to focus on the core attributes underlying the giftedness construct as a more viable basis for characterizing giftedness in these students is presented in this section. The method by which these attributes were developed is summarized along with suggestions for using the core attributes as the foundation for developing observation and identification programs to better recognize the gifted potential in target population student groups.

In the initial phase of our project, educators were asked to provide a prototypical description of a target population child they felt was bright. These educators were asked to focus on describing intellectual and specific academic aptitudes because school programs most often address exceptional abilities in these two areas. A guide to assist them in developing their descriptions was created using (a) two of the intelligences proposed by Gardner (1983)—linguistic and logical-mathematical, (b) the five generic characteristics

proposed by Gallagher and Kinney (1974) to describe gifted advantaged and disadvantaged children, and (c) examples of items from culture-specific checklists that reflected behaviors that were associated with displays of logical-mathematical and linguistic intelligences.

A review of this guide revealed a number of similarities. For example, the checklist items also appeared to reflect the underlying meanings of the gifted abilities proposed by Gallagher and Kinney and appeared to articulate behaviors that students would exhibit when showing ability in either of the two intelligences proposed by Gardner. Based on these observations, a decision was made to explore these connections more fully. The next section discusses the method by which this investigation took place and the rationale for making the core attributes associated with the giftedness construct central to this investigation.

The Rationale for Focusing on Attributes Underlying the Giftedness Construct

A construct is a set of hypothesized traits, abilities, or characteristics abstracted from a variety of behaviors to have educational or psychological meaning (Sax, 1980). Giftedness is a psychological construct, according to Hagen (1980). As such, she contends that it is not a directly observable trait of an individual. She also maintains that accurate inferences about the giftedness construct depend on the choices of characteristics and behaviors that we choose to observe and appraise. This approach to giftedness is reflected in current thinking where the giftedness construct is described as incorporating a broad range of cognitive, motivational, and personality characteristics (Hoge, 1989; Passow & Rudnitski, 1993). Further, the appropriateness of focusing on core attributes of giftedness is reflected in recommendations by Hoge (1988, 1989) to base assessments of giftedness on a clear statement specifying the traits, aptitudes, and behaviors that underlie the construct. This need to reach consensus on a clear statement of the traits, aptitudes, and behaviors that underlie the giftedness construct is reflected in the research findings and discussions of writers such as the following.

Bernal (1980) was an early advocate of the value of basing the identification of gifted students on an evaluation of their exhibition of behaviors associated with the giftedness construct. He was particularly assertive that such a move would provide less reason for educators to be bound to the cognitive preferences of the dominant ethnic group and greater reason to seek a valid and operationally useful identification and selection process for all gifted children. Culross (1989) noted that seeking consensus regarding what constitutes giftedness would reduce the pitfalls in screening and selecting students for gifted programs. Leung (1981) suggested that absolute characteristics of giftedness provide an effective way for educators to consider attributes of giftedness in different cultural and economic groups. Finally, Shaklee et al. (1994) felt that the best way to identify young gifted and talented minority or economically disadvantaged gifted students was to base observation and assessment procedures on universal identifiers of intellectual potential.

Each of these researchers and writers speaks to the importance of clarifying the attributes underlying the giftedness construct as the basis for observing gifted potential in the target population. The development of a common language to describe these core attributes of giftedness may provide a more viable foundation on which to build observation and identification methods to discover gifted potential as it is expressed within and across groups, regardless of cultural, physical, geographical, or socioeconomic differences.

Method

A qualitative content analysis method was chosen to carry out this analysis of the gifted literature to determine common features that characterize gifted children from the target population and the gifted population in general. Our goal was to achieve "semantic validity" by sorting data units which had similar meanings or connotations into the same category.

A brief statement of the parameters that structured the search for core attributes follows:

1. The basic attributes defined as underlying the giftedness construct would be referred to as traits, aptitudes, and behaviors according to Sax's (1980) and Hagen's (1980) definitions and interpretations of a construct.
2. Dynamic rather than static descriptions would be used to define the basic attributes associated with the giftedness construct.
3. When selecting categories, the broadest and most flexible concepts would be sought to encompass the core traits, aptitudes, and behaviors that reflect the essence or core of giftedness, within and across different cultures and contexts.

The steps that were followed in carrying out this analysis are briefly outlined:

Step 1 Locate data sources.

The University of Georgia Libraries' catalog was used to develop data on the general attributes of gifted children as found in books and other reports, published from approximately 1957 to the present.

The literature was searched for checklists or rating scales that had been specifically developed to observe the characteristics of gifted African American, Hispanic, and Native American students.

Step 2 Define the recording unit; locate units of information.

Recording units are defined as a phrase or sentence that described the characteristics of a gifted child.

The information in each data source was thoroughly read to locate phrases or sentences that were used to describe the characteristics of gifted children. Books, book chapters, and other reports yielded 306 data entries; 120 data entries were generated from culture specific checklists and rating scales. Each entry was coded by author, year, page number, and category (i.e., gifted, talented, creative, or genius) and placed on a separate card.

Step 3 Develop categories for coding.

Sixteen broad categories in which to place results of independent coding of data were developed: (a) learning style, (b) memory, (c) inquiry, (d) ethical/moral, (e) reasoning, (f) problem solving ability, (g) insight, (h) imagination/creativity, (i) interests, (j) motivation, (k) humor, (l) communication skills, (m) leadership, (n) critical evaluation of self/others, (o) relationship with people and ideas, and (p) altruism.

Step 4 Sort data units into the static or dynamic pile.

Based on the parameters established earlier, 44 data units derived from books, book chapters, or other reports, and 25 data units derived from checklists were eliminated because it was agreed by the researchers that they represented static descriptions of gifted attributes. In the first data pool 260 data units remained and 95 data units remained in the second.

Step 5 Sort data units into categories.

Researchers independently read and sorted the data units into one of the 16 initial categories or they created a new category. Five additional categories were created: (a) sensorial/ emotional sensitiveness, (b) aesthetic sensitivity, (c) mental maturity, (d) precocity, and (e) physical characteristics.

Data units were reviewed three times before the researchers reached 95% agreement regarding the placement of the phrases or sentences into one of the 21 categories.

Step 6 Determine core categories.

If one or more of the following criteria suggested by Weber (1990) could be applied to a category, the category was eliminated:

- Reflects characteristics that may be interpreted as being more related to specific cultural values and beliefs (e.g., ethical and moral behaviors; aesthetic sensitivities).
- Is debatable as a category in which the level of performance could be described as gifted or not gifted (e.g., critical evaluation of self and others, altruism, interpersonal relationships).
- Includes data units that are in the culture-specific literature but not in the general literature.

Using these criteria, 10 categories were retained as the core attribute categories. The definitions and general descriptions of these 10 categories are presented in Table 1.

Conclusions

Summary of Findings

Of the 262 descriptive units of information generated from the general literature 167 (64%) were related to one of the core attribute categories. Eighty-two (86%) of the 95 descriptive units of information generated from the culture-specific checklists were related to one of the core attribute categories. Well over half of the descriptive units of information in both information pools were considered to reflect the same or similar characteristics associated with gifted students.

Table 1

Definitions and General Descriptions of the 10 Core Attributes of Giftedness (Traits, Aptitudes, and Behaviors)

Core Attribute	General Description
Motivation: Evidence of desire to learn	Forces that initiate, direct and sustain individual or group behavior in order to satisfy a need or attained goal
Communication skills: Highly expressive and effective use of words, numbers, symbols, etc.	Transmission and reception of signals or meanings through a system of symbols (codes, gestures, language, numbers)
Interest: Intense (sometimes unusual) interests	Activities, avocations, objects, etc. that have special worth or significance and are given special attention
Problem-solving ability: Effective (often inventive) strategies for recognizing and solving problems	Process of determining a correct sequence of alternatives leading to a desired goal or to successful completion or performance of a task
Imagination/Creativity: Produces many ideas; Highly original	Process of forming mental images of objects, qualities, situations, or relationships, which are not immediately apparent to the senses; solve problems by pursuing nontraditional patterns of thinking
Memory: Large storehouse of information on school or non-school topics	Exceptional ability to retain and retrieve information
Inquiry: Questions, experiments, explores	Method or process of seeking knowledge, understanding, or information
Insight: Quickly grasps new concepts and makes connections; senses deeper meanings	Sudden discovery of the correct solution following incorrect attempts based primarily on trial and error
Reasoning: Logical approaches to figuring out solutions	Highly conscious, directed, controlled, active, intentional, forward-looking, goal oriented thought
Humor: Conveys and picks up on humor well	Ability to synthesize key ideas or problems in complex situations in a humorous way; Exceptional sense of timing in words and gestures

Implications

It was proposed that identifying the core attributes associated with the giftedness construct would provide a better basis for establishing procedures to recognize, identify, and plan educational experiences for gifted students from minority or economically disadvantaged families and areas. Ten core attributes were identified: communication skills, imagination/creativity, humor, inquiry, insight, interests, memory, motivation, problem-solving, and reasoning. Implications for using these core attributes (a) to facilitate educators' recognition of gifted abilities in student populations from minority or economically disadvantaged families and areas, and (b) to guide educators in the selection of measures for identification minority or economically disadvantaged families and areas follow:

1. Students from minority and economically disadvantaged families and areas are likely to fare better in the identification procedures for gifted programs when a variety of test and nontest measures are used to assess potential across the wide range of traits, behaviors, and aptitudes associated with the giftedness construct.
2. The use of a wide variety of test and nontest measures make it less likely that students who are underrepresented in gifted programs will be handicapped by identification systems that rely on one or two measures to determine eligibility for gifted program services.
3. The interpretation of performances on this variety of measures would require the use of standards that accommodated the differences in the expression of gifted student characteristics as exhibited by students who come from diverse cultural, ethnic, economic, and environmental backgrounds. The core attributes of giftedness provide a common framework within which to make these interpretations.
4. The core attributes of giftedness provides an important way to assist educators working with minority or economically disadvantaged students in the establishment of links between specific gifted characteristics and the manner in which they may be displayed in their classrooms.

Arriving at a single conception of giftedness is difficult, given the abundance of competing conceptions of giftedness in the literature and the variety in the rules and regulations used by different states and local programs to determine who is eligible for services. This paper has provided a way to consider achieving consensus about the core attributes of giftedness, regardless of the words used to define the concept or the influences of culture and environment on gifted abilities. Findings from this study of the characteristics of gifted individuals as they are described in the general literature and in the culture-specific literature, suggest that gifted individuals are most consistently recognized by their motivation, interests, problem-solving ability, imagination/creativity, memory abilities, inquiry skills, insight, reasoning capacities, and sense of humor. It is suggested that these core attributes be the basis for referring, observing, and identifying children for gifted program services and for designing programs to address their needs.

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Core Attributes of Giftedness: A Foundation for Recognizing the Gifted Potential of Minority and Economically Disadvantaged Students

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Introduction

An ultimate goal of gifted educators is to recognize, as early as possible, those children who show potential for exceptional performance as adults and to provide them with the special instruction they need to develop that potential. A common assertion is that children who show this potential for exceptional performance are present in every segment of society (Baldwin, 1991; Clark, 1992; Davis & Rimm, 1994; Gallagher, 1994b; Kitano & Kirby, 1986; Maker, 1983; Marland, 1972; Pendarvis, Howley, & Howley, 1990). However, it is consistently observed that gifted and talented children who are members of minority populations, who have limited proficiency in the English language (LEP), or who come from economically disadvantaged families and areas are underrepresented in programs for the gifted (Ford & Harris, 1990; Frasier, in press; Gallagher, 1991; Gallagher & Courtright, 1988).

One of the reasons given to explain the underrepresentation of these students in gifted programs relates to the ability of educators to recognize their display of gifted behaviors (Baca & Chinn, 1982; Bermúdez & Rakow, 1990; Bernal, 1980; Dabney, 1988; Leung, 1981; Pendarvis, Howley, & Howley, 1990; Whitmore, 1982). These authors suggested that low socioeconomic status (SES), minority group membership, or limited competence in the use of the English language of these children may negatively affect the identification of these children as gifted. As Gallagher (1994b) noted, for example, difficulties in trying to sort out the unique characteristics of minority gifted students may be related to the fact that many of them come from impoverished homes. Clark (1992) maintained that "A major problem encountered in providing for gifted students among the low SES population is the attitude, shared by teachers and parents alike, that giftedness could not exist in this population" (p. 428). According to Callahan and McIntire (1994), the emphasis on remediation rather than development of talent may account for the low recognition of gifted Native American and Alaska Native students. Others have made similar observations about the emphasis on remediation rather than on the development of talent in minority groups (Baldwin, 1991; Cummins, 1989; Ford & Harris, 1990; Hilliard, 1991; Samuda, Kong, Cummins, Pascual-Leone, & Lewis, 1989). The purpose of this paper is to explore a different perspective for observing and assessing characteristics of giftedness in minority, LEP, and economically disadvantaged student populations.

First, a summary of what we know about the attributes of gifted and high achieving students from minority or economically disadvantaged families and areas is presented in this paper. Second, a proposal for focusing on core attributes that underlie the giftedness construct as a more viable basis for observing and identifying giftedness in minority or economically disadvantaged student groups is presented. A description of how a set of core attributes of giftedness was derived is also provided. Finally, implications for using these core attributes as the basis for a paradigm that better addresses the identification and education of gifted students from underrepresented populations are presented in the final section.

Target Populations

Race, ethnicity, culture, minority group status, low socioeconomic status, handicapped status, preschool and primary aged children, and gender have all been used to label students who are underrepresented or underserved in programs for gifted children (Gallagher, 1994a; Passow, 1982; Richert, 1991; VanTassel-Baska, Patton, & Prillaman, 1991; Whitmore & Maker, 1985). It is beyond the scope of this paper to address each one of these groups. Because African American, Native American, and Hispanic students have been and continue to be the most prominent subjects of when underrepresentation in gifted programs is discussed, it is these gifted students who are the focus in this paper. For the most part, these students will be referred to as the target population. Labels such as minority, culturally different, and economically disadvantaged are frequently used interchangeably in the literature and in practice to refer to the students who are the target population. Therefore, anyone of these terms will be used as appropriate.

Scope of the Literature Review

The literature chosen for review in this paper was selected if it contained primary descriptions of the cognitive and affective characteristics of target population students. Causes for any of these descriptions are included only if they are an integral part of the discussion of their characteristics. However, the primary concern is not the cause but the characteristics of these students that have emerged over the years.

Because of the limited base of empirical research investigating the attributes of gifted target students, some of the descriptions have evolved from speculative opinions and conclusions derived from practice or experience. However as Ogawa and Malen (1991) have observed, such literature can still provide important insights because of the meanings people attach to the phenomenon of interest, in this case gifted potential in students from target population groups.

Many of the studies and other reports explicitly describing the characteristics of target students were carried out from 1960 through the 1980s. One of the reasons may be that objectives of researchers and practitioners during this period were primarily focused on developing theories to account for cultural deficiencies or cultural differences. More recently, studies and reports have focused on developing identification strategies and programs to address the educational and environmental deficiencies that impede the identification of gifted target students.

What We Know About Attributes of Giftedness in Target Student Populations

Findings from several research studies and reports have recounted the attributes of gifted or high achieving target population students. The reports and studies reviewed here are concerned with comparisons within and between groups and descriptions based on studies of specific cultural and disadvantaged groups. The themes of these studies and reports are concerned with personality variables, motivations to achieve, cognitive attributes, and other behavioral descriptions.

Between-Group and Within-Group Comparison Studies and Reports

Frierson (1965) was interested in the effects of cultural deprivation on the development of talent. He undertook a study to determine any significant differences between upper and lower status students who were divided into four groups: (a) upper status gifted students, (b) lower socioeconomic status gifted students, (c) upper status average students, and (d) lower socioeconomic status average students. The groups were matched on sex, age, ethnic background, grade, and school experience with differences between any two groups based on socioeconomic status or mental ability. The mean I.Q. for the upper status gifted group was 133.2; the group of lower status gifted children had a mean I.Q. of 132.1. Upper and lower status gifted children were found to be more similar in attributes than were lower status gifted and average children. However, when the two gifted groups were compared, upper status gifted children were described as more self-controlled, more ambitious to do well, and better able to control their emotions while lower status gifted children were described as being more excitable, demanding, self-assertive, and undependable. Upper status gifted children, more than lower status gifted children, were also described as liking school better, more likely to choose better quality reading materials, being more interested in after school reading, and being more aware of their parents' desires for them to attend college. Lower status gifted children were described as showing a greater preference for adventure-hero type comics and for competitive sports. Frierson concluded that differences between the two groups of gifted children were clearly associated with differences in their socioeconomic status.

Another study which compared the characteristics of gifted minority and low socioeconomic status children with those of their nongifted peers was conducted by Tidwell (1981). Children in this study were selected for gifted program participation by criteria that did not rely on intelligence test scores as the primary criterion and were described as having significantly higher self-concepts than nonselected students. It was also found that these students had more positive academic self-concepts and higher self-esteem. Subjects for this study were low SES students from Anglo American, Asian American, Hispanic American, and African American backgrounds.

Davidson and Greenberg (1967) compared differences in personality variables between high and low achievers from lower class backgrounds. Attributes that distinguished between the two lower class groups were found to be very similar to those that distinguish between middle class achievers and underachievers. For example, high achievers were described as having higher ego strength, well developed controls and self-confidence, greater maturity and seriousness of interest, a need to seek adult approval, and a willingness to postpone immediate pleasures. Similarly, Arnold (1974) compared the classroom behaviors of disadvantaged gifted learners with those of regularly identified gifted learners and found the disadvantaged learners to exhibit greater dependence on the teacher for directions, to reason in a more sequential manner, and to be more patient in dealing with tasks.

In a similar manner Glaser and Ross (1970) retroactively investigated factors that contributed to the differential success rates of individuals growing up in disadvantaged environments. Fourteen factors were found to distinguish between successful Mexican American and African American males and those who were not successful. Some of the factors were concerned with the personal attributes that contributed to the success of some of the subjects (e.g., having a strong sense of self, pride, and worth; the ability to free themselves from the negative conditions of their environment; and a strong belief that hard work or study would pay off). Successful subjects were also described as being effective in their ability to channel any rage they felt over being disadvantaged into strategic actions. Further, successful subjects were attracted by goals such as creativity and self-determination, had high risk-taking capacities especially when experimenting with new behaviors, and were aware of alternative paths toward achieving future goals.

While results of studies comparing personality or nonintellective traits of gifted advantaged and disadvantaged children appear to reveal many similarities across cultural and economic boundaries, significant but more negative differences in cognitive functioning have been reported in other studies. Tannenbaum (1983) suggested that these differences are most evident in cognitive organizing as is demonstrated by the lowered performance of disadvantaged gifted children on tests of mental ability. Sisk (1973) described deficiencies in cognitive functioning of disadvantaged gifted students as evidenced by their limited vocabularies, use of nonstandard grammar, inability to observe and state sequences of events, inability to perceive cause and effect relationships, and inability to categorize. Because of these deficiencies, Sisk felt that disadvantaged students exhibit classroom behaviors that hinder their identification as gifted students. She delineates these behaviors as including negative attitudes toward school, toward teachers, and toward their own achievement; an inability to focus on long-term goals; and an inclination to use violence to resolve problems.

A different view of the cognitive competencies of African American individuals, including children, is presented by Shade (1991). Drawing from several sources, she summarizes overall cognitive-behavioral attributes that typify the social-cultural system in which African Americans are socialized and come to know things. She concluded from several studies of modality preference that African Americans appear to have a high motoric capabilities and to use visual perception as a way of protecting and orienting themselves in the environment rather than for gathering information. African American children are also largely trained to concentrate more on people rather than non-people type information, thus being more people than object oriented. Results from a number of studies summarized by Shade also point to a preference among African Americans for affective materials and a high level of social interaction in their learning environments. Interestingly, she reports that when divided by achievement level African American high achievers and Euro-American low achievers were more extroverted. Euro-American high achievers and African American low achievers, however were more introverted. Overall, she concludes that African Americans come to know their world more effectively through their kinetic and tactile senses, through their keen observing of the human scene, and through verbal descriptions. Tannenbaum (1983) and Sisk (1973) saw these cognitive differences as deficiencies that underlie the low test performance of African American children and their weak performances in the classroom. Shade, instead, noted that the differences reflect cognitive strengths that are expressed in distinct ways due to differences in information processing preferences and differences in information analysis and organization.

Ethnicity and cultural group membership have always been assumed to have an affect on the pattern of abilities or the intellective and non-intellective traits unique to a specific group. As a result, some researchers have focused on identifying the

distinctiveness of profiles of strengths displayed by different ethnic and cultural groups in American society.

Bruch (1971) isolated patterns of cognitive strengths among southeastern African American students using an abbreviated version of the Stanford-Binet Intelligence Test. She concluded that these students evidenced strengths in visual, auditory, and figural content (e.g., art and music); memory; convergent production in practical problem-solving situations; awareness of details of descriptions; fluency of ideas; spontaneous categorization and classification of spatial items; and awareness of natural relationships or systems. Based on her research, she concludes that analyzing test results for evidence of these attributes would contribute to the effective identification of gifted African American students.

Similarly, Meeker (1978) investigated the cognitive strengths of children whose environments were felt to hinder their success in school. She was concerned that children who were unfamiliar with formal English would appear less intelligent when simply measured on traditional standardized mental ability tests. Using the *Structure of Intellect (SOI)* as her basis for analysis, she determined patterns of gifted strengths among Navajo children to include auditory memory and figural ability. She also noted that these children were not able to demonstrate their ability in the figural dimension because of differences in the structure of the Navajo language and mainstream English.

Baldwin (1978) took a broader view to encompass target population students whose achievement might be negatively affected by cultural diversity, socioeconomically deprived status, and geographic isolation. Her list of common attributes include descriptions of their communication and learning styles as characterized by a language that is rich in imagery and is persuasive, a sensitiveness and alertness to movement, and an intuitive grasp of situations. She also describes these children as having strong group affiliations and as being skilled in dealing with their environment. Intellectually, these children are described as being adept at logical reasoning, planning, and pragmatic problem solving. Their creative strengths include a high tolerance for ambiguities, the ability to produce inventive and revolutionary ideas, and flexible and fluent thinking. Finally, she describes these children as having high interests and special aptitudes in music, drama, and creative writing.

Descriptions Specifically Related to Giftedness in Specific Minority Groups and Gifted Economically Disadvantaged Students

Hispanics

One of the earliest studies conducted on the attributes of giftedness in the Hispanic population was conducted by Bernal (1974). Because of his beliefs that tests and other techniques used to identify gifted and talented youngsters were biased in favor of the populations for which they were devised, Bernal conducted a study to determine behavioral descriptors of gifted Mexican American students. Attributes or characteristics with the highest discriminant power were found to be related to these children's leadership behaviors, acceptance of adult authority, self-control, and above-average school performance. Bernal was particularly concerned with those Hispanic students who were not easily identified using traditional criteria. His list of attributes included: (a) the ability to rapidly acquire English language skills, once exposed to the language and given an opportunity to use it expressively; (b) an enjoyment of intelligent (or effective) risk taking behavior, often accompanied by a sense of drama; (c) the ability to keep busy and entertained, especially by imaginative games and ingenious applications, such as getting the most out of a few simple toys and objects; and (d) the ability to understand and remember

detailed instructions when given the first time. Gifted Hispanic students, according to Bernal, also demonstrated exceptional leadership ability with a heavy emphasis on interpersonal skills and are recognized by their peers as someone who has the ability to "make it" in the Anglo society. They usually have older playmates and are capable of easily engaging in adult conversation. Bernal (1978) suggested that these qualities, and the psychological traits they imply, should be included in the design of measures and procedures to assess the potential of Hispanic students.

Maker and Schiever (1989) provided an abbreviated comparison of absolute aspects of giftedness compared with typical cultural characteristics of Hispanics, and resulting behavioral differences because of differences in culture, language, and the need of Hispanic individuals to be effective at negotiating two cultures. For example, they interpreted the high level of verbal ability associated with giftedness with the Hispanic individuals ability to communicate fluently using the formal language of the majority society in school and the language of their peers and the Hispanic community when at home. Udall (1989) also commented that a significant ability distinguishing between gifted and nongifted Hispanic students (as well as other minority students) is their ability to adapt successfully to the demands of two cultures.

Zappia (1989) provided a similar description of Hispanic children when she described their language preference, proficiency, and use patterns (in both languages) in the home, school, and community. Other attributes included their being able to successfully function in two cultures and to communicate fluently, even if the English used is non-standard (Maker & Schiever, 1989).

Native Americans

In the general literature Native American students are described as being less assertive than children from other majority and minority cultures and exhibiting a collective identity (Florey & Tafoya, 1988; Sisk, 1989). Indeed a number of researchers and writers have reported on the importance of tribal identity when describing Native Americans in general. Native Americans have suffered from group descriptions as much as other minority groups when attempts are made to come up with one list of typical behaviors. While understanding the limitations of a common cultural description, Garrison (1989) suggested what she saw as basic distinctions between the Native American culture and the mainstream culture. Specifically she noted that Native American individuals tend to be less dependent on language to communicate ideas, to learn by observation and to teach by modeling, and to consider the group more important than the individual.

Compared to African Americans and Hispanics, Native American students have received relatively little attention in the gifted literature. An important study that called attention to the gifted attributes specific to Native American students was conducted by Tonemah and Brittan (1985). They noted the strong tribal perspective associated with the concept of giftedness in their description of gifted attributes in four areas: (a) acquired skills in language, learning, and technological skills; (b) tribal/cultural understanding referring to their exceptional knowledge of ceremonies, tribal traditions, and other tribes; (c) personal and human qualities such as high intelligence, visionary/inquisitive/intuitive, respectful of elders, and creative skills; and (d) aesthetic abilities, referring to unusual talents in the visual and performing arts, and arts based in the Indian culture.

In a recent publication edited by Callahan and McIntire (1994), a pool of potential traits/indicators gleaned from the literature on identifying gifted Native American students is provided. The characteristics are organized into 14 areas that range from general intellectual attributes to giftedness in specific areas. Careful instructions are given

regarding how to best select and use these characteristics in the development of instruments for use in assessment. Two other reports related to the attributes of Native American students are cited in Callahan and McIntire:

1. A list of traits related to learning style, personal traits, and environmental limitations is described by Hartley (1991) as contributing to the lack of recognition of gifted/talented Navajo students. [In general, these attributes refer to limitations of Navajo students when traditional procedures are used to identify them for gifted program participation.]
2. Romero and Schultz (1992) delineated four areas that Pueblo Indian tribal Elders identified as relevant talent dimensions: (a) special abilities in speech and song, (b) ability to create with the hands, (c) abilities in acquiring and knowing when to apply knowledge, and (d) ability to empathize and give to others. [It was noted that these talent dimensions were based on interpretations of giftedness within the context of the Pueblo Indian community after a rejection of the traditional majority view of giftedness].

African Americans

Hilliard's (1976) study of African American gifted students yielded a list of attributes based on behavioral styles. Items for a "WHO" and "O" checklist were developed from extensive interviews, the literature, and from observations by his research staff to determine their fit with two hypothesized categories: atomistic-objective and synthetic-personal. It was concluded that African American children demonstrated a synthetic-personal style. That is, they tend to approach the world in a way that allows them to bring together divergent experiences and to distill them to discover the essence of a matter without undue concern for all the small pieces which make up a given experience. This is in contrast to the atomistic-objective style wherein the habitual pattern for approaching an experience involves an attempt to break down that experience into components which can be understood.

Much like the approach established by Hilliard (1976) that observations of style are important in recognizing gifted attributes in African American children, Hamilton (1993) developed two compatible scales, one for parents (*The Gifted Children Locator scales for Parents-GCL-P*) and one for teachers (*The Gifted Children Locator scales for Teachers-GCL-T*). The six factors identified in Hamilton's scales identify areas in which the exceptional attributes of giftedness can be observed for gifted and non-gifted African American children: verbal perceptual problem-solving ability, perceptual organization ability, assertive verbal expressive ability, verbal memory with concentration ability, differential evaluation ability, and spontaneous mental/perceptual problem-solving. A well above average rating (+2 to 3 SD) from teachers and parents indicating that the child optimally demonstrates attributes of giftedness, is demonstrated by a score of 247 and 248, respectively. An above average rating (+1 to 2 SD) range from 221-247 for the parent scale and 209-247 for the teacher scale. Scores on the *GCL-P* and the *GCL-T* can range from 51 to 255.

Lee (1984, 1989) concentrated on developing a psychosocial profile of successful rural African American adolescents. Besides being part of families described as close and supportive, he described successful rural African American adolescents as having positive self-concepts linked to their extended view of themselves as members of collective family and community systems, possessing traditional values associated with their religious faith, and having good interpersonal relationships. They are also successful in school and active in a variety of extra-curricular activities, e.g., the 4-H club, Future Farmers of America, and Future Business Leaders of America. In addition, these successful youths are keenly

aware of future occupational opportunities and understand the education they must acquire to be prepared for such opportunities.

The development of a profile of the personal traits of educationally successful African American children was also the subject of research by Shade (1981). For this study she chose only students from middle-income range African American families to avoid the confounding variable of income when successful students from lower income groups are included in a research sample. Males in her study were described as being more introverted, emotionally stable, and more shrewd, though less expressive than males in the standardized sample of the *Coan-Cattell Early School Personality Questionnaire (ESPQ)*. Females were also found to be more introverted and less expressive. In addition they were described as more independent, less in need of protection, and displaying a tendency to be less placid, conforming, and tranquil than females in the standardized sample. When compared with their standardization counterparts, Shade reported that the females in her study were more enthusiastic, self-confident, individualistic, and shrewd. In summary, the academically successful African American middle-class students in Shade's study were described as being rather reserved and detached instead of affiliative and participating. They were very aware that to achieve their goals they must learn how to operate within the framework of certain expectations of their school and community while also maintaining their concept of self-determination.

Economically Disadvantaged Children

Torrance (1964, 1965, 1971, 1974, 1977) has been a long time advocate of efforts to recognize the creative strengths displayed by disadvantaged children as a key to identifying their gifted potential. He proposed, therefore, that the search for giftedness among the culturally different should focus on identifying their creative positives. These characteristics should, in turn, become the basis for educational programs and for career development activities.

As a result of observations made during a series of summer workshops conducted with disadvantaged children, Torrance (1971, 1977) developed a checklist to help guide the search for giftedness in culturally different groups. He named this checklist *The Checklist of Creative Positives*. Attributes included on the checklist are concerned with (a) problem solving skills (e.g., originality of ideas in problem solving, fluency, and flexibility in figural media); (b) communication styles (e.g., use of expressive speech, use of colorful language rich with imagery); and (c) learning styles (e.g., enjoyment of skills in group activities). It also includes descriptions of (a) interests and activities enjoyed by culturally different children (e.g., enjoyment of and ability in music, rhythm, creative movement, dance, and dramatics); and (b) descriptions of the typical methods these children use to respond to various stimuli (e.g., high emotional responsiveness, exceptional ability to express feelings and emotions).

A Summary of Themes

This literature reflects a strong tendency to focus on (a) similarities and differences in personality traits between gifted minority and majority students, (b) unique learning and communication styles presumed to be characteristics of specific cultural groups, and (c) the exceptional abilities that gifted target students demonstrate as they negotiate between their culture and the majority culture. Different issues shape the approach to the research and other writings developed to describe the characteristics of gifted target students. One approach was to focus on deficiencies. The emphasis was on low socioeconomic status of target students and the effect this has on cognitive functioning and performance in academic areas. Another approach focused on these children's cognitive and creative strengths as

revealed through testing and observing. Yet another approach was shaped by comparing the characteristics of disadvantaged students with advantaged students. Finally, an approach was developed out of a perceived need to base characteristics of gifted target students on results from investigations carried out within a specific cultural group.

These different approaches may well be the result of the continuous search that has been conducted to find effective ways to resolve the difficulties that minority students face in gaining recognition for their gifts and talents. They may also represent the many factors that must go far beyond descriptions of relevant characteristics of giftedness when describing gifted minority children. More than for any other group, these more extended discussions must include concerns with (a) discrimination in American society, (b) the value of efforts to establish the concept of giftedness within the boundaries of a specific cultural group, (c) the need to distinguish the meaning of giftedness within a minority group from the meaning of giftedness in the Euro-American culture, (d) the inadequacies of traditional assessment measures and procedures to identify gifted minority students, and (e) the effort that must be put forth to reconcile the concept of individual recognition for excellence with cultural concepts that emphasizes group solidarity as a unique cultural feature.

Attributes Underlying the Giftedness Construct

As noted earlier, one of the problems felt to impact the representation of target population students in programs for the gifted is related to the inability of educators to recognize these students' display of gifted behaviors in the classroom. Plans to address this concern by better describing giftedness in economically disadvantaged and limited English proficient populations were an integral part of a project at The University of Georgia (Frasier, 1990). The overall goal of this project was to develop a more effective way to facilitate the recognition of gifted children from these groups.

In this section, a proposal to focus on the core attributes underlying the giftedness construct as a more viable basis for characterizing giftedness in these students is presented. The method by which these attributes were developed is also described. Suggestions are made for using these core attributes as the foundation for developing observation and identification programs to better recognize the gifted potential in target population student groups.

Background

In the initial phase of our project, plans were made to ask educators to provide a prototype of a target population child who they felt was bright by describing the various performance features that led them to this conclusion. In formulating the design for data collection, we elected to ask these educators to focus on describing brightness as it related to intellectual giftedness and specific academic aptitudes because school programs most often address exceptional abilities in these two areas. Two of the intelligences proposed by Gardner (1983)—linguistic and logical-mathematical—were selected as the primary domains to reflect this typical focus of school programs for gifted students. Five generic characteristics proposed by Gallagher and Kinney (1974) to describe gifted children, whether they were from advantaged or disadvantaged backgrounds, were used to define descriptors of abilities that might be associated with the two intelligences. Additionally, we sought to offer some guidance to educators in the development of their descriptions by providing them with examples of items from culture-specific checklists that reflected behaviors associated with displays of logical-mathematical and linguistic intelligences.

When we compared the two intelligences proposed by Gardner (1983) and the basic gifted abilities outlined by Gallagher and Kinney (1974) with items from a list of characteristics developed by Hagen (1980) and items from culture-specific checklists, two observations were evident (see Appendix A). There appeared to be great similarities in the meanings of items on the various checklists designed to observe gifted potential in the target groups. The checklist items also appeared to reflect the underlying meanings of the gifted abilities proposed by Gallagher and Kinney and appeared to articulate behaviors that students would exhibit when showing ability in either of the two intelligences proposed by Gardner (1983). Further observations suggested that many items on the checklists appear to emphasize more than other characteristics, the importance of recognizing target population students' motivation for intellectual pursuits, their learning styles, and their interests.

Based on these observations, we decided to explore these connections more fully. The next section discusses the method by which this investigation took place and the rationale for making the core attributes associated with the giftedness construct central to this investigation.

The Rationale for Focusing on Attributes Underlying the Giftedness Construct

A construct is a set of hypothesized traits, abilities, or characteristics abstracted from a variety of behaviors to have educational or psychological meaning (Sax, 1980). Giftedness is a psychological construct, according to Hagen (1980). As such, she contends that it is not a directly observable trait of an individual. She also maintains that accurate inferences about the giftedness construct depend on the choices of characteristics and behaviors that we choose to observe and appraise. This approach to giftedness is reflected in current thinking where the giftedness construct is described as incorporating a broad range of cognitive, motivation, and personality characteristics (Hoge, 1989; Passow & Rudnitski, 1993). Further, the appropriateness of focusing on core attributes of giftedness is reflected in recommendations by Hoge (1988, 1989) to base assessments of giftedness on a clear statement specifying the traits, aptitudes, and behaviors that underlie the construct. This need to reach consensus on a clear statement of the traits, aptitudes, and behaviors that underlie the giftedness construct is reflected in the research findings and discussions of writers such as the following.

Bernal (1980) was an early advocate of the value of basing the identification of gifted students on an evaluation of their exhibition of behaviors associated with the giftedness construct. He was particularly assertive that such a move would provide less reason for educators to be bound to the cognitive preferences of the dominant ethnic group and greater reason to seek a valid and operationally useful identification and selection process for all gifted children. Further, he comments that the problems of referring minority students for gifted program participation may very well stem from an ill-defined construct of giftedness. Likewise, Culross (1989) noted that seeking consensus regarding what constitutes giftedness would reduce the pitfalls in screening and selecting students for gifted programs.

Leung (1981) suggested that absolute characteristics of giftedness provide an effective way for educators to consider attributes of giftedness in different cultural and economic groups. Absolute aspects, according to Leung, are those traits that symbolize giftedness across these different groups. Conversely, specific aspects of giftedness are absolute aspects that have been affected by culture and environment. Leung feels that adequate understanding of specific aspects of giftedness are predicated on clarifying absolute attributes.

Shaklee, Barbour, Ambrose, Rohrer, Whitmore, and Viechnicki (1994) felt that the best way to identify young gifted and talented minority or economically disadvantaged gifted students is to base observation and assessment procedures on universal identifiers of intellectual potential. They sorted 18 primary identifiers of intellectual potential into four groups of identifiers used to assess exceptional potential: (a) exceptional learner, (b) exceptional user, (c) exceptional generator, and (d) exceptional motivation. They believed that while the manifestation of an identifier may be influenced by the environmental context or the cultural heritage of the child, the identifier would remain consistent. As a result they maintained that "it may be necessary to look for manifestations of exceptional memory beyond the traditional academic tasks and into areas such as exceptional memory for complex dance steps, or exceptional memory in storytelling or in remembering musical lyrics" (p. 28).

Each of these researchers and writers speak to the importance of clarifying the attributes underlying the giftedness construct as the basis for observing gifted potential in target populations. The development of a common language to describe these core attributes of giftedness may provide a more viable foundation on which to build observation and identification methods to discover gifted potential as it is expressed within and across groups, regardless of cultural, physical, geographical, or socioeconomic differences.

Method

A qualitative content analysis method was chosen to carry out this analysis of the gifted literature to determine common features that characterize gifted children from the target population and the gifted population in general. Content analysis is a broad term used to describe a variety of procedures that permit valid inferences to be made about the message content of a narrative text (Rosengren, 1981; Weber, 1990). The central idea is that words, phrases, or other units of text may be classified in the same category if it is agreed that they have a similar meaning. According to Weber, these meanings may be precise (such as grouping synonyms together), or may share similar connotations (such as grouping together several words implying a concern with a concept such as wealth or power). Compared with techniques such as interviews, content analysis usually yields unobtrusive measures in which neither the sender nor the receiver of the message is aware that it is being analyzed. Hence, there is little danger that an act of measurement will act as a force for change that confounds the data.

Our goal was to achieve "semantic validity" by sorting data units which had similar meanings or connotations into the same category. Weber specifies that for semantic validity to occur words or other coding units must possess similar connotations. That is, semantic validity exists when persons familiar with the language and texts examine lists of words (or other units) placed in the same category and agree that these words have similar meanings or connotations (Krippendorff, 1980 cited in Weber, 1990, p. 21).

Parameters That Structured the Search for Core Attributes

1. The basic attributes defined as underlying the giftedness construct would be referred to as traits, aptitudes, and behaviors according to Sax's (1980) and Hagen's (1980) definitions and interpretations of a construct. *The Dictionary of Psychology* (Chaplin, 1985) defines a trait as a relatively persistent and consistent behavior pattern, an aptitude as the capacity to perform in the future or some potential ability, and a behavior as any response made by an organism.

2. Dynamic descriptions would be used to define the attributes associated with the giftedness construct. It was agreed that dynamic descriptions are better able to be universally interpreted in different cultural and environmental contexts. A description would be defined as dynamic if it could be interpreted as depicting some form of movement, action, or change. For example, "demonstrates an accelerated use and understanding of vocabulary" would be interpreted as dynamic. Conversely, a description would be defined as static if it could be interpreted as describing a fixed trait, aptitude, or behavior. For example, "has an advanced vocabulary" or "has a high IQ score" would be interpreted as static.
3. When selecting categories, the broadest and most flexible concepts would be sought to encompass the core traits, aptitudes, and behaviors that reflect the essence or core of giftedness, within and across different cultures and contexts. This was considered an important requirement if these attributes were to be optimally amenable to interpretations in a broad range of cultural and environmental settings.

Steps Followed in Analyzing Data Units

Step 1 Locate data sources.

The University of Georgia Libraries' catalog was used to develop data on the general attributes of gifted children as found in books and other reports, published from approximately 1957 to the present. This period was chosen because the launch of Sputnik by the Russians stimulated a more intense national interest in gifted children. Major texts and an increased number of articles on gifted children were generated since this time.

Because gifted children have also been labeled at times as talented, creative, or genius, books and other reports with any of these labels in the title were cataloged to ensure a comprehensive search of relevant data sources. The data sources were selected for analysis if the entire discussion, or at least half of it, was devoted to enumerating and discussing the characteristics of gifted children.

An additional search was made of the literature to identify checklists or rating scales that had been specifically developed to observe the characteristics of gifted African American, Hispanic, and Native American students.

Step 2 Define the recording unit; locate units of information.

We defined the recording unit as a phrase or sentence that described the characteristics of a gifted child.

The information in each data source was thoroughly read to locate phrases or sentences that were used to describe the characteristics of gifted children. Books, book chapters, and other reports yielded 306 data entries; 120 data entries were generated from culture specific checklists and rating scales. Each entry was coded by author, year, page number, and category (i.e., gifted, talented, creative, or genius) and placed on a separate card. Four sets of cards were made, a master set, and one set for each of three researchers.

Step 3 Develop categories for coding.

Next, we developed 16 broad categories in which to place our independent coding of data units. The 16 categories initially developed were: (a) learning style, (b) memory, (c) inquiry, (d) ethical/moral, (e) reasoning, (f) problem solving ability, (g) insight, (h) imagination/creativity, (i) interests, (j) motivation, (k) humor, (l) communication skills, (m) leadership, (n) critical evaluation of self/others, (o) relationship with people and ideas, and (p) altruism.

Step 4 Sort data units into the static or dynamic pile.

Based on the parameters established earlier, 44 data units derived from books, book chapters or other reports, and 25 data units derived from checklists were eliminated because it was agreed by the researchers that they represented static descriptions of gifted attributes. In the first data pool 260 data units remained and 95 data units remained in the second.

Step 5 Sort data units into categories.

Each researcher independently read and either sorted the data units into the 16 initial categories or created a new category if the original categories were not thought to be appropriate. As a result, five additional categories were developed after the first reading, making a total of 21 categories: (a) sensorial/emotional sensitiveness, (b) aesthetic sensitivity, (c) mental maturity, (d) precocity, and (e) physical characteristics.

Data units were reviewed three times before the researchers reached 95% agreement regarding the placement of the phrases or sentences into one of the 21 categories.

Step 6 Determine core categories.

If one or more of the following criteria suggested by Weber (1990) could be applied to a category, the category was eliminated:

- Reflects characteristics that may be interpreted as being more related to specific cultural values and beliefs (e.g., ethical and moral behaviors; aesthetic sensitivities).
- Is debatable as a category in which the level of performance could be described as gifted or not gifted (e.g., critical evaluation of self and others, altruism, interpersonal relationships).
- Includes data units that are in the culture-specific literature but not in the general literature.

Using these criteria, 10 categories were retained as the core attribute categories. The definitions and general descriptions of these 10 categories are presented in Table 1. The retained data units were classified into one of the 10 categories. Table 2 provides the frequencies and percentages for these data units.

Table 1

Definitions and General Descriptions of the 10 Core Attributes of Giftedness (Traits, Aptitudes, and Behaviors)

Core Attribute	General Description
Motivation: Evidence of desire to learn	Forces that initiate, direct and sustain individual or group behavior in order to satisfy a need or attained goal
Communication skills: Highly expressive and effective use of words, numbers, symbols, etc.	Transmission and reception of signals or meanings through a system of symbols (codes, gestures, language, numbers)
Interest: Intense (sometimes unusual) interests	Activities, avocations, objects, etc. that have special worth or significance and are given special attention
Problem-solving ability: Effective (often inventive) strategies for recognizing and solving problems	Process of determining a correct sequence of alternatives leading to a desired goal or to successful completion or performance of a task
Imagination/Creativity: Produces many ideas; Highly original	Process of forming mental images of objects, qualities, situations, or relationships, which are not immediately apparent to the senses; solve problems by pursuing nontraditional patterns of thinking
Memory: Large storehouse of information on school or non-school topics	Exceptional ability to retain and retrieve information
Inquiry: Questions, experiments, explores	Method or process of seeking knowledge, understanding, or information
Insight: Quickly grasps new concepts and makes connections; senses deeper meanings	Sudden discovery of the correct solution following incorrect attempts based primarily on trial and error
Reasoning: Logical approaches to figuring out solutions	Highly conscious, directed, controlled, active, intentional, forward-looking, goal oriented thought
Humor: Conveys and picks up on humor well	Ability to synthesize key ideas or problems in complex situations in a humorous way; Exceptional sense of timing in words and gestures

Table 2

Frequency and Percentage of Phrases and Sentences Generated From the General and Culture-Specific Gifted Literature

Core Attributes	General (n = 167)	Culture Specific (n = 82)
Communication Skills	8 (5)	16 (20)
Creativity/Imagination	22 (13)	19 (23)
Humor	7 (4)	4 (5)
Inquiry	4 (2)	3 (4)
Insight	20 (12)	11 (13)
Interests	25 (15)	6 (7)
Memory	12 (7)	5 (6)
Motivation	35 (21)	14 (17)
Problem Solving	10 (6)	3 (4)
Reasoning	24 (14)	1 (1)

Note. Numbers in parentheses are percentages.

Conclusions

Summary of Findings

The intent of this analysis was to investigate the extent to which characteristics of gifted children as reported in the general literature matched or were similar to characteristics of gifted target population students as reported on culturally specific checklists. One-hundred-sixty-seven (64%) of the 262 descriptive units of information generated from the general literature were related to one of the core attribute categories. Eighty-two (86%) of the 95 descriptive units of information generated from the culture-specific checklists were also related to one of the core attribute categories. Well over half of the descriptive units of information in both information pools were considered to reflect the same or similar characteristics of gifted students.

Implications

It was proposed that identifying the core attributes associated with the giftedness construct would provide a better basis for establishing procedures to recognize, identify, and plan educational experiences for gifted students from minority or economically disadvantaged families and areas. Ten core attributes were identified: communication skills, imagination/creativity, humor, inquiry, insight, interests, memory, motivation, problem-solving, and reasoning. Implications for using these core attributes (a) to facilitate educators' recognition of gifted abilities in student populations from minority or economically disadvantaged families and areas, and (b) to guide educators in the selection of measures for identification minority or economically disadvantaged families and areas follow:

1. Students from minority and economically disadvantaged families and areas are likely to fare better in the identification procedures for gifted programs when a variety of test and nontest measures are used to assess potential across the wide range of traits, behaviors, and aptitudes associated with the giftedness construct.
2. The use of a wide variety of test and nontest measures makes it less likely that students who are underrepresented in gifted programs will be handicapped by identification systems that rely on one or two measures to determine eligibility for gifted program services.
3. The interpretation of performances on this variety of measures would require the use of standards that accommodated the differences in the expression of gifted student characteristics as exhibited by students who come from diverse cultural, ethnic, economic, and environmental backgrounds. The core attributes of giftedness provide a common framework within which to make these interpretations.
4. The core attributes of giftedness provides an important way to assist educators working with minority or economically disadvantaged students in the establishment of links between specific gifted characteristics and the manner in which they may be displayed in their classrooms.

Arriving at a single conception of giftedness is difficult, given the abundance of competing conceptions of giftedness in the literature and the variety in the rules and regulations used by different states and local programs to determine who is eligible for services. This paper has provided a way to consider achieving consensus about the core attributes of giftedness, regardless of the words used to define the concept or the influences of culture and environment on gifted abilities. Findings from this study of the characteristics of gifted individuals as they are described in the general literature and in the culture-specific literature, suggest that gifted individuals are most consistently recognized by their motivation, interests, problem-solving ability, imagination/creativity, memory abilities, inquiry skills, insight, reasoning capacities, and sense of humor. It is suggested that these core attributes be the basis for referring, observing, and identifying children for gifted program services and for designing programs to address their needs.

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Appendix A

Preliminary Explorations of Core Attributes of Giftedness

CATEGORY OF GIFTEDNESS	GENERIC INDICATORS	RELEVANT CHECKLIST INDICATORS
1. LINGUISTIC (Gardner)	1.1. Meaningfully manipulates some symbol system (Gallagher & Kinney)	1.1.1. Use of language (Hagen) 1.1.2. Expressive speech (Torrance): Uses words to express thought and meaning (Tonemah) 1.1.3. Expressiveness of gestures, "body language," etc., and ability to interpret same (Torrance) 1.1.4. Large vocabulary (Tonemah, Bernal) 1.1.5. Humor (Torrance) 1.1.6. Richness in imagery in informal language (Torrance) 1.1.7. Speaks correctly with good grammar for his/her age (Bernal)
	1.2. Thinks logically given appropriate data (Gallagher & Kinney)	1.2.1. Devises or adapts a systematic strategy for solving problems and changes strategy if it is not working (Hagen) 1.2.2. Solves problems systematically (Tonemah) 1.2.3. Criticalness of own performance (Hagen) 1.2.4. Quality of questions (Hagen) 1.2.5. Sees logical solutions to problems (Tonemah)
	1.3. Uses stored knowledge to solve problems (Gallagher & Kinney)	1.3.1. Breadth of information (Hagen) 1.3.2. Depth of information (Hagen) 1.3.3. Listens well and remembers things that are heard (Tonemah) 1.3.4. Understands and remembers detailed instructions when given the first time (Bernal)

CATEGORY OF GIFTEDNESS	GENERIC INDICATORS	RELEVANT CHECKLIST INDICATORS
LINGUISTICS (Gardner) Continued	1.4. Reasons by verbal analogy (Gallagher & Kinney)	1.4.1. Quality of examples, illustrations or elaborations in explaining something (Hagen) 1.4.2. Readily grasps abstract concepts (Tonemah)
	1.5. Extends or extrapolates knowledge to new situations or unique applications (Gallagher & Kinney)	1.5.1. Innovative use of common materials (Hagen) 1.5.2. Collections of materials or hobbies (Hagen) 1.5.3. Articulateness in role playing, sociodrama, and storytelling (Torrance, Tonemah) 1.5.4. Imagines stories with detail (Tonemah) 1.5.5. Originality in ideas in problem-solving (Torrance) 1.5.6. Invents ways to make improvements to things or ways of doing things (Tonemah) 1.5.7. Uses imagery to gain insight, ideas, or understanding (Tonemah) 1.5.8. Enjoys doing things in new ways (Tonemah)

CATEGORY OF GIFTEDNESS	GENERIC INDICATORS	RELEVANT CHECKLIST INDICATORS
2. LOGICAL-MATHEMATICAL (Gardner)	2.1. Meaningfully manipulates some symbol system (Gallagher & Kinney)	2.1.1. Use of quantitative expressions and quantitative reasoning (Hagen)
	2.2. Thinks logically given appropriate data (Gallagher & Kinney)	2.2.1. Devises or adapts a systematic strategy for solving problems and changes strategy if it is not working (Hagen) 2.2.2. Sees logical solutions to problems (Tonemah) 2.2.3. Criticalness of own performance (Hagen) 2.2.4. Quality of questions (Hagen)
	2.3. Uses stored knowledge to solve problems (Gallagher & Kinney)	2.3.1. Breadth of information (Hagen) 2.3.2. Depth of information (Hagen) 2.3.3. Listens well and remembers things that are heard (Tonemah); 2.3.4. Understands and remembers detailed instructions when given the first time (Bernal)
	2.4. Reasons by numerical analogy (Gallagher & Kinney)	2.4.1. Quality of examples, illustrations or elaborations in explaining something (Hagen) 2.4.2. Readily grasps abstract concepts (Tonemah)
	2.5. Extends or extrapolates knowledge to new situations or unique applications (Gallagher & Kinney)	2.5.1. Innovative use of common materials (Hagen, Torrance, Tonemah) 2.5.2. Collections of materials or hobbies (Hagen) 2.5.3. Originality in ideas in problem-solving (Torrance) 2.5.4. Invents ways to make improvements to things or ways of doing things (Tonemah) 2.5.5. Uses imagery to gain insight, ideas, or understanding (Tonemah)

CATEGORY OF GIFTEDNESS	GENERIC INDICATORS	RELEVANT CHECKLIST INDICATORS
3. MOTIVATION FOR INTELLECTUAL PURSUITS (EMERGED)		3.1. Persistence on uncompleted tasks (Hagen, Tonemah, Torrance) 3.2. Practices to excel in skill area (Tonemah) 3.3. Absorption in intellectual tasks (Hagen) 3.4. Extensiveness of exploratory behavior (Hagen) 3.5. Questioning attitude (Tonemah) 3.6. Wants to know more about many things (Tonemah) 3.7. Curiosity (Tonemah) 3.8. Problem-centeredness (Torrance) 3.9. Quickness of warm-up (Torrance) 3.10. Boredom with routine work (Tonemah) 3.11. Responds readily with thoughts, words, or actions (Tonemah) 3.12. Takes risks to do well (Tonemah) 3.13. Gives best effort; goes to limit of ability. 3.14. Preference for complexity, difficulty, and novelty (Bernal) 3.15. Shows self-discipline (Bernal)

CATEGORY OF GIFTEDNESS	GENERIC INDICATORS	RELEVANT CHECKLIST INDICATORS
4. LEARNING ENVIRONMENT/ LEARNING STYLES/INTERESTS (EMERGED)		4.1. Skill in group problem solving (Torrance, Tonemah) 4.2. Influence in group decisions (Tonemah) 4.3. Concentrates well when information is presented as a whole (Tonemah) 4.4. Responsiveness to the kinesthetic (Tonemah) 4.5. Responsiveness to the concrete (Torrance, Tonemah) 4.6. Enjoys learning about factual events and things (Tonemah) 4.7. Exhibits a concern for the environment or nature (Tonemah) 4.8. Emotional responsiveness (Torrance) 4.9. Other children look for and want to be around him/her (Bernal) 4.10. Takes care of his/her things (Bernal) 4.11. Questions parental rebukes (Bernal) 4.12. Enjoys doing things in new ways (Tonemah)

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